

**Climate and Clean Air Coalition (CCAC)  
Scientific Advisory Panel Expert Workshop  
“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

**BACKGROUND**

Short-lived climate pollutants (SLCPs), including methane and black carbon<sup>1</sup>, are unique because of their climate warming properties, short lifetime in the atmosphere, and impact on different aspects of sustainable development due to their air polluting characteristics. Climate and development policy could be informed by improvements in comparison metrics and methodologies for quantifying the physical, health, and agricultural impacts of these substances, as well as improved understanding of their potential role in emissions reduction efforts. This challenge of appropriate metrics for SLCPs has been a major science-policy issue and was identified as an important objective of Strategy 4 of the Climate and Clean Air Coalition (CCAC) Five-Years Strategic Plan. Goal 3 of Strategy 4 seeks to “contribute to the development of metrics that can help quantify the multiple benefits of SLCP mitigation, so that the impact of relevant interventions can be estimated, monitored, and reported across the CCAC and beyond”<sup>2</sup>. Hence, this topic was a major discussion item at the March 2016 Science Policy Dialogue of the Coalition. Participants at the Dialogue recommended that the Coalition’s Scientific Advisory Panel convene an expert workshop on this topic.

In response to this recommendation, the Scientific Advisory Panel with the support of the Coalition secretariat, is organizing a workshop on “metrics for evaluating and reporting on black carbon and methane interventions”. The workshop will take place on 16 and 17 March 2017 in Ottawa, Canada.

**OBJECTIVES**

The workshop will bring together scientists, experts and other relevant stakeholders to discuss the science and economic issues relevant to policymaking and development aspects related to metrics for accounting for methane and black carbon emission reduction interventions and how to quantify and report these benefits.

*The ultimate goal of the workshop is to advance efforts toward a scientifically credible consensus on how to quantify the multiple benefits of methane and black carbon emission abatement interventions, taking into consideration the climate, health, agricultural, economic and other development perspectives. The workshop will raise the issues hindering the achievement of consensus on black carbon and methane metrics, make an attempt to identify solutions to these issues, map out a process for advancing scientific discussion and follow up actions. The workshop will also seek to provide guidance on black carbon emissions inventory development and reporting, taking into consideration existing inventory guidelines such as the Convention on Long-range Transboundary Air Pollution (CLRTAP) guidelines.*

---

<sup>1</sup> Except otherwise stated, all reference to black carbon means black carbon and its co-emitted substances including organic carbon, sulphates, NO<sub>x</sub>, carbon monoxide, methane, and non-methane volatile organic compounds.

<sup>2</sup> <http://www.ccacoalition.org/en/resources/ccac-five-year-strategic-plan>

**Climate and Clean Air Coalition (CCAC)  
Scientific Advisory Panel Expert Workshop  
“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

The output and recommendations from the workshop will serve as input to the 2017 CCAC Science Policy Dialogue scheduled for 25 April 2017 in Chile, and will provide guidance for future Coalition’s activities.

**PARTICIPANTS**

The workshop is expected to be technical, with deliberations focused on the scientific basis and their policy relevance. Hence participants are expected to have appropriate expertise and knowledge in the workshop’s topics including the linkages to current policies especially in the climate and sustainable development contexts.

In order to ensure adequate participation of experts within and outside of the Coalition as well as ensure a manageable workshop that will deliver the expected outputs, the total number of participants will be limited to a maximum of 70. Member of the Coalition’s Scientific Advisory Panel as well as Coalition Partners will identify and nominate leading experts for the workshop. The Advisory Panel and the Secretariat, in conjunction with the Coalition’s Steering Committee, will make the decision on the final list of participants.

**WORKSHOP STRUCTURE**

The workshop will be structured as a mix of moderated plenary and breakout group sessions. The sessions will comprise of a combination of short science-policy focused presentations, panel sessions, and group discussions. Each session would have predetermined expected outcome(s), which would guide the discussions. The session moderators would be tasked to guide discussions toward achieving the expected outcome(s). The sessions are described in the tentative agenda in Annex 1.

**EXPECTED WORKSHOP OUTPUT**

The main output from the workshop will be a summary report that highlights the main discussion points, conclusions reached, and recommended follow-up actions, including how the Coalition may respond to the recommendations.

**WORKSHOP BACKGROUND PAPERS**

To provide adequate context for discussions, the following background papers are to be developed and made available to participants prior the workshop:

- ☐ Review of recent publications on methane and black carbon emissions and impacts
- ☐ CCAC/SAP paper: good practices for quantifying, estimating, and reporting on SLCP interventions
- ☐ A pathway to the target paper
- ☐ SLCPs and SDGs paper
- ☐ CCAC secretariat paper: an overview of black carbon policy framework
- ☐ Brief on Quantification Methodologies for Black Carbon (BC) Reduction Benefits
- ☐ A collection of publications relevant to the topics of the workshop

**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

**ANNEX 1: TENTATIVE ANNOTATED WORKSHOP AGENDA**

**Overarching Objectives:**

1. Advance efforts toward a scientifically credible consensus on metrics for accounting for black carbon and methane interventions
2. Agree on a way forward on the development of a widely applicable inventory and reporting guideline for black carbon.

**DAY 1 – ACCOUNTING METRICS**

Time	Duration	Agenda Item
08:30-09:00		<b>ARRIVALS AND REGISTRATION</b>
09:00-09:10	10 mins	<b>WELCOME AND REASON FOR WORKSHOP</b> [Rita Cerruti, CCAC Co-Chair]
09:10-09:25	15 mins	<b>KEYNOTE ADDRESS</b> [Catherine McKenna – Minister, Environment & Climate Change, Canada – Via Video]
09:25–10:25	60 mins	<p><b>SESSION 1 - PLENARY</b></p> <p><b>CONTEXT SETTING; LATEST SCIENCE AND KNOWLEDGE ON METHANE AND BLACK CARBON</b>  <b>Session Description and Objective :</b> This session will aim to provide context for the overall goal of the workshop. It would include highlights of latest science and knowledge on black carbon and methane , including latest understanding of emissions sources, trends , projections and policy implication of current trends and projection. It will also feature presentation on the role of black carbon and methane in current global agreements and actions such as the Post -2015 Development Agenda including the Sustainable Development Goals (S DGs) and the Paris Agreement including the associated Nationally Determined Contributions (NDCs). The session will also highlight why having accounting metrics and methodology for quantification and reporting is important.</p> <p><b>MODERATOR:</b> Rita Cerruti</p> <p><b>Presentations:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> A pathway to achieving the climate and development targets and why metrics are needed 20 minutes [Drew Shindell]</li> <li><input type="checkbox"/> Overview of recent science on black carbon and methane and their implications 20 minutes [AR Ravishankara/V. Ramanathan, TBD]</li> <li><input type="checkbox"/> Questions and Discussions 20 minutes</li> </ul> <p><b>Expected outcome:</b> At the end of the session, participants would have a clear understanding of the context of the workshop and latest knowledge on methane and black carbon. It is expected that participants would have a common understanding of the emission sources, trends, projections and impacts of black carbon and methane, as well as their role in achieving the Paris Agreement and the SDGs , hence will be well prepared for the discussions on accounting metric and reporting.</p> <p><b>NOTE:</b> The moderator for this session would seek to gear the discussion towards ensuring that all participants have a common understanding of the latest knowledge on black carbon and methane and their role in the Paris Agreement and the SDGs. This will be important for achieving the overarching objectives of the workshop.</p> <p><b>Background documents:</b> Review of recent publications on methane and black carbon emissions and impacts; A pathway to the target paper, SLCPs and SDGs paper.</p>
10:25-10:45	20 mins	Health Break

**Climate and Clean Air Coalition (CCAC)  
Scientific Advisory Panel Expert Workshop  
“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

10:45–12:30	105 mins	<p><b>SESSION 2 - PLENARY PANEL SESSION</b></p> <p><b>ACCOUNTING METRICS FOR BLACK CARBON &amp; METHANE</b>  <b>Session description and objectives :</b> This panel session would seek to discuss the latest knowledge on metrics for evaluating the impacts of black carbon and methane from the climate, health, agriculture, economic and development perspective. The session will set the stage for the breakout discussions, providing an overview of issues to be discussed in greater details during the breakout groups.</p> <p><b>MODERATOR:</b> <i>Ray Minjares</i></p> <ul style="list-style-type: none"> <li>□ <b>Panellist 1 – Metrics for evaluating the climate impacts of methane and black carbon interventions</b> – A presentation on the general landscape of climate metrics for black carbon and methane. Talk would highlight available metrics, their merits and drawbacks, the uncertainties, and propose which of the available metrics are most appropriate with justification. <i>[Keith Shine]</i> 20 minute</li> <li>□ <b>Panellist 2 – Metrics for accounting for the health impacts of black carbon and methane interventions</b> - A presentation on the general landscape of available metrics for accounting for the health impacts and benefits of black carbon and methane interventions, with highlights of the merit and demerit of available options and associated uncertainties. <i>[Susan Anenberg]</i> 15 minute</li> <li>□ <b>Panellist 3 – Metrics for evaluating the agricultural impacts of black carbon and methane interventions</b> – A presentation on agricultural-related metrics to characterise black carbon and methane interventions. Presentation would provide insight on available metrics, their merits and demerits, the uncertainties, and propose which is most appropriate with justification. <i>[Lisa Emberson]</i> 15 minute</li> <li>□ <b>Panellist 4 – Economic perspective on accounting metrics for black carbon and methane interventions</b> - A presentation on economic valuation of impacts related to black carbon and methane interventions, including market and non-market cost as well as some mention of implementation cost and monetization of the benefits. Presentation could also touch on appropriate metrics relevant to attracting black carbon and methane mitigation finance. <i>[Mike Holland]</i> 15 minute</li> <li>□ <b>Panellist 5 – Social impact of methane and black carbon and associated metrics</b> - A presentation on the interactions between climate, health, agricultural and economic impacts of methane and black carbon emissions providing a context for appropriate metrics for accounting for these impacts. Presentation could also include the variation of impacts on different socio-economic groups as well as linkage to the SDGs <i>[Drew Shindell]</i> 15 minute</li> <li>□ Questions, comments and discussions - 25 minutes</li> </ul> <p><b>Expected outcome:</b> This session will prepare the ground for further discussion at the breakout session after lunch. At the end of the session, all participants should have a clear understanding of the metrics that are out there, their merit and demerits.</p> <p><b>Background documents:</b> CCAC/SAP Paper: <i>Good practice for quantifying, estimating, and reporting on SLCP interventions; relevant publications on accounting metrics, Brief on Quantification Methodologies for Black Carbon (BC) Reduction Benefits</i></p> <p>NOTE: Moderator of this session should agree on breakout group participants before breaking for lunch</p>
12:30-14:00	90 mins	Lunch Break
14:00-15:45	105 mins	<b>SESSION 3 - BREAKOUT GROUPS</b>

**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<p><b>DEEPER DIG INTO ACCOUNTING METRICS</b></p> <p><b>Session description and objectives:</b> The breakout session will dig deeper into the various aspects of accounting metrics for black carbon and methane. There will be four breakout groups: climate, health, agriculture, and economic valuation.</p> <p>Each of the four groups will look into the impacts of methane and black carbon, the benefits of mitigation actions, and discuss appropriate metrics for quantifying these impacts and benefits.</p> <p>The overall goal will be to achieve some form of agreement and/or set of recommendations, at the end of the group discussion, on the appropriate metrics for characterizing these impacts/benefits, with adequate justification, further work as needed, remaining questions, and how to pursue the recommendations.</p> <p>The breakout group will start with 2 or 3 presentations digging deeper into the topics and would be followed by a moderated discussion.</p> <p><b>SESSION MODERATOR:</b> <i>Johan Kuylenstierna</i></p> <p>□ <b><u>Group 1: Climate Metrics</u></b> <i>[Group Moderator – Borgar Aamaas]</i></p> <p><b>Presentation 1:</b> How climate metrics work: climate impacts of methane and black carbon and relevance for metrics development <i>[Marianne Tronstad Lund] - 15 minutes</i></p> <p><b>Presentation 2:</b> Accounting metrics for climate impacts and benefits of black carbon and methane interventions; challenges and barriers: a deeper look. <i>[Tami Bond] - 20 minutes</i></p> <p><b>Moderated group discussion</b> - 70 minutes</p> <p>□ <b><u>Group 2: Health Metrics</u></b> <i>[Group Moderator – Jeff Brook]</i></p> <p><b>Presentation 1:</b> How health metrics work: Health impacts relevant to estimating the impact of BC and methane interventions and relevance for metrics development <i>[Jill Baumgartner] - 15 minutes</i></p> <p><b>Presentation 2:</b> Accounting metrics for health impacts and benefits of black carbon and methane interventions; challenges and barriers: a deeper look. <i>[Patrick Kinney] - 20 minutes</i></p> <p><b>Moderated group discussion</b> - 70 minutes</p> <p>□ <b><u>Group 3: Agricultural Metrics</u></b> <i>[Group Moderator – Harry Clark]</i></p> <p><b>Presentation 1:</b> How agriculture metrics are developed: agricultural impacts relevant to estimating the impact of BC and methane interventions and relevance for metrics development <i>[Fidelity Hayes] - 15 minutes</i></p> <p><b>Presentation 2:</b> Accounting metrics for agricultural impacts and benefits of black carbon and methane interventions; challenges and barriers: a deeper look. This should also include the climate and air pollution impacts on agriculture <i>[Keith Smith] - 20 minutes</i></p> <p><b>Moderated group discussion</b> - 70 minutes</p> <p>□ <b><u>Group 4: Economic Valuation and Metrics</u></b> <i>[Group Moderator – Gary Kleimann]</i></p> <p><b>Presentation 1:</b> Economic valuation of the impacts of black carbon and methane mitigation from climate perspective and relevant metrics <i>[Steffen Kallbekken/Stine Aakre] - 20 minutes</i></p> <p><b>Presentation 2:</b> Economic valuation (market and non-market) of the impacts of black carbon and</p>
--	--	---

**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<p>methane interventions from development perspective and relevant metrics [Anna Alberini] - 20 minutes</p> <p><b>Moderated group discussion</b> - 70 minutes minimum</p> <p><b>Suggested questions to guide discussions:</b></p> <ol style="list-style-type: none"> <li>1. What are the arrays of available metrics for black carbon and methane for the group's theme (that is climate, health, agriculture and economics)?</li> <li>2. Which metrics would be best suited within the UNFCCC / NDC / SDGs context?</li> <li>3. Which metrics would be best suited in the context of climate finance?</li> <li>4. How can suggested metrics be used by the various policy communities, such as national or regional governments?</li> <li>5. What are the challenges/barriers for uptake in using some of these metrics in the policy community?</li> </ol> <p><b>Expected outcome:</b> At the end of the breakout groups, there should be some form of agreement and/or set of recommendations from each group on possible metrics for accounting for the climate, health, agriculture and economic impacts of methane and black carbon, with credible scientific justification. The breakout groups should also provide recommendations on further activities related to the discussion in the groups. This may include developing scientific publications, preparing briefings, reports or guidance documents on how to use the metrics, or further research on the metrics.</p> <p><b>NOTE:</b> Moderators for this should take note of the expected outcomes and guide discussion towards achieving them.</p>
15:45-16:00	15 mins	Health Break
16:00-18:00	120 mins	<p><b>SESSION 4: PLENARY</b></p> <p><b>SESSION MODERATOR:</b> Johan Kuylensstierna</p> <p><b>REPORTING BACK FROM THE GROUPS AND FURTHER DISCUSSIONS</b></p> <p><b>Session description and objectives:</b> Each group will report on their outputs, including main findings, conclusions and recommendations. Participants will discuss these further in the plenary, with the goal of strengthening the recommendations and achieving some form of agreement and/or set of recommendations.</p> <ul style="list-style-type: none"> <li>□ <b>Group 1 Presentation: Climate Metrics</b> [Nominated Presenter] 10 minutes</li> <li>□ <b>Plenary Discussion on findings</b> 15 minutes</li> <li>□ <b>Summary and agreement on next steps</b> [Johan Kuylensstierna] 5 minutes</li> <li>□ <b>Group 2 Presentation: Health Metrics</b> [Nominated Presenter] 10 minutes</li> <li>□ <b>Plenary Discussion on findings</b> 15 minutes</li> <li>□ <b>Summary and agreement on next steps</b> [Johan Kuylensstierna] 5 minutes</li> <li>□ <b>Group 3 Presentation: Agriculture Metrics</b> [Nominated Presenter] 10 minutes</li> <li>□ <b>Plenary Discussion on findings</b> 15 minutes</li> <li>□ <b>Summary and agreement on next steps</b> [Johan Kuylensstierna] 5 minutes</li> <li>□ <b>Group 4 Presentation: Economics Metrics</b> [Nominated Presenter] 10 minutes</li> <li>□ <b>Plenary Discussion on findings</b> 15 minutes</li> <li>□ <b>Summary and agreement on next steps</b> [Johan Kuylensstierna] 5 minutes</li> </ul>

**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<b>Expected outcome:</b> The session will improve on the recommendations from the breakout groups and come up with a final agreements on the recommendations and way forward.
18:00-18:10	10 mins	Close of Day 1
19:30		Reception hosted by Environment and Climate Change, Canada
<b>DAY 2 – BLACK CARBON INVENTORY AND REPORTING PROTOCOL</b>		
<b>Time</b>	<b>Duration</b>	<b>Agenda Item</b>
08:30-09:00		<b>ARRIVALS AND REGISTRATION</b>
09:00-09:10	15 mins	<b>RECAP OF DAY 1 AND PLANS FOR DAY 2</b> [Drew Shindell]
09:10–09:50	40 mins	<p><b>SESSION 5A - PLENARY</b>  <b>BLACK CARBON IN CURRENT REGULATORY AND POLICY FRAMEWORKS</b>  <b>Session Description and objective:</b> This session aims to set a context for Day 2 discussion on inventory development and reporting on black carbon. It will discuss how black carbon are being managed under current regulatory and policy frameworks at the national, regional and global levels. It will also highlight existing and emerging reporting protocol taking into consideration relevance to the Paris Agreement including the associated NDCs and the SDGs.</p> <p><b>SESSION MODERATOR:</b> Farhan Akhtar</p> <p><b>Presentations:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Overview of black carbon in current regulatory /policy frameworks, including reporting (inventory) protocols as well as gaps and challenges [Martin Williams] 15 minutes</li> <li><input type="checkbox"/> Additional perspectives [Kejun Jiang] 10 minutes</li> <li><input type="checkbox"/> <b>Questions and Discussions</b> 15 minutes</li> </ul> <p><b>Expected outcome :</b> At the end of the session, participants would have a broad overview of how black carbon is currently regulated at the national, regional and global levels as well as existing reporting mechanisms and methodologies. This is expected to help prepare participants for further discussion on developing improved inventory and reporting methodology.</p> <p><b>Background documents:</b> Review of recent publications on methane and black carbon emissions and impacts; CCAC secretariat paper: an overview of black carbon policy framework.</p>
09:50–11:35	105 mins	<p><b>SESSION 5B - PLENARY PANEL SESSION</b>  <b>INVENTORY AND REPORTING: EXAMPLES; GAPS AND CHALLENGES; EMERGING SOLUTIONS</b>  <b>Session Description and Objective:</b> The panel discussion will look at the gaps and challenges in inventory and reporting black carbon and will also seek to highlight emerging solutions putting them in the context of the NDCs and the SDGs. The session will set the stage for the breakout groups by providing an overview of issues to be discussed in greater details during the breakout groups.</p> <p><b>SESSION MODERATOR:</b> Zbigniew Klimont</p>

**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<ul style="list-style-type: none"> <li>□ <b>Panellist 1 – Black carbon emissions inventory and reporting; successes, gaps and challenges: an example from CLRTAP</b> – A short presentation/talk on CLRTAP activities on black carbon emissions inventory, successes, drawbacks, needed improvements, and emerging solutions [Chris Dore, Aether Ltd] 15 minute</li> <li>□ <b>Panellist 2 – Black carbon emissions inventory and reporting; successes, gaps and challenges: an example of the CCAC SNAP LEAP -IBC</b> – A short presentation/talk on the CCAC SNAP LEAP -IBC tool for black carbon inventory development, highlighting its successes, drawbacks, as well as opportunities for improvement. It talk will also highlight relevance for emissions sources in industrialized and developing countries [Harry Vallack, SEI] 15 minute</li> <li>□ <b>Panellist 3 – IPCC perspective on inventory development including for black carbon</b> - [Dominique Blain] 10 minute</li> <li>□ <b>Panellist 4 – Perspective from the Multilateral Fund for the Implementation of the Montreal Protocol on data reporting -</b> [Ico San Martini] 10 minute</li> <li>□ <b>Panel 5 – National perspectives to black carbon emission inventory, challenges, gaps, opportunities for improvement and emerging solutions</b> - A brief (5 minutes) intervention from selected countries on the challenges they have faced in developing black carbon inventory. <ul style="list-style-type: none"> <li>○ <b>China</b> [Kejun Jiang TBC] 5 minute</li> <li>○ <b>Mexico</b> [Abraham Ortinez] 5 minute</li> <li>○ <b>Japan</b> [Satoru Chatani, TBC] 5 minute</li> <li>○ <b>Chile</b> [Mauricio Osses] 5 minute</li> <li>○ <b>Nepal</b> [Maheswar Rupakhet] 5 minute</li> </ul> </li> <li>□ <b>Questions, comments and discussions</b> – 25 minutes</li> </ul> <p><b>Expected outcome :</b> This session will prepare the ground for further discussion at the breakout group session. At the end of the session, important gaps and needs, as well as emerging solutions and their relevance to the NDCs and SDGs would have been identified, thereby preparing participants for the breakout group aimed at identifying solutions and way forward.</p> <p><b>Background documents:</b> CCAC/SAP Paper: Good practice for quantifying, estimating, and reporting on SLCP interventions; Review of recent publications on methane and black carbon emissions and impacts</p>
	<b>NOTE</b>	Coffee/Tea will be available during Session 5B
11:35-13:00	85 mins	<p><b>SESSION 6 - BREAKOUT GROUPS</b>  <b>IMPROVING BLACK CARBON INVENTORY AND REPORTING</b></p> <p><b>Session Description and Objective:</b> This breakout session will discuss further the issues raised during the panel discussion with the goal of coming to an agreement on how to improve existing inventory and reporting protocols for black carbon across different sectors, taking into consideration differences between industrialized and developing countries as well as relevance to the NDCs and the SDGs.</p> <p><b>SESSION MODERATOR:</b> Gregory J Smallwood</p> <p>There will be three groups all focusing on inventory and reporting for black carbon.</p> <ul style="list-style-type: none"> <li>□ <b>Group 1: Inventory and reporting on black carbon</b> [Moderator – Amanda CurryBrown]</li> <li>□ <b>Group 2: Inventory and reporting on black carbon</b> [Moderator – Michael Strogies]</li> <li>□ <b>Group 3: Inventory and reporting on black carbon</b> [Moderator - Kevin Thomson]</li> <li>□ <b>Group 4: Inventory and reporting on black carbon</b> [Moderator - Maygan McGuire]</li> </ul> <p>The breakout group will seek to answer the following questions moderated discussion.</p>



**Climate and Clean Air Coalition (CCAC)**  
**Scientific Advisory Panel Expert Workshop**  
**“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<p>Suggested questions to guide discussions:</p> <ol style="list-style-type: none"> <li>1. Which black carbon emitting sector lacks inventory/reporting protocols? How can this be developed?</li> <li>2. Are some existing protocols less robust than others? If so, which would most benefit from refinement?</li> <li>3. How can existing methodologies be adapted for black carbon sectors?</li> <li>4. What are the underlying data needs for supporting robust inventories? How can we address these gaps?</li> <li>5. How can inventory and reporting protocols be aligned with NDCs and SDGs reporting?</li> <li>6. How can protocols be made relevant for both industrialized and developing countries?</li> <li>7. What are the issues with consistency in the measuring and reporting of black carbon emissions? How does sampling affect the measurements? What is the impact of using different measurement instruments? What should we be measuring (mass concentration, number concentration, absorption, etc.)?</li> <li>8. What are the needed actions to ensure broad acceptance &amp; implementation of new protocols?</li> <li>9. What are the next step actions in developing a robust, widely acceptable and easy-to-implement reporting protocol?</li> </ol> <p><b>Expected outcome</b> : Each group will come up with recommended actions on how to improve existing methodologies for black carbon emissions inventory and reporting for all emitting sectors, taking into consideration relevance for the climate and sustainable development. The groups will also provide suggestions on how to pursue the recommendations. The breakout group could also provide recommendations on further activities related to the discussion in the groups, which could include developing scientific publications, preparing briefings, reports and further research needs.</p> <p><b>NOTE:</b> Moderator for this should take note of the expected outcome and guide discussions toward achieving this.</p>
13:00-14:00	60 mins	Lunch Break
14:00-15:30	90 mins	<p><b>SESSION 7: PLENARY</b>  <b>REPORTING BACK FROM THE GROUPS AND FURTHER DISCUSSIONS</b></p> <p>Each group will report their outputs to the plenary, including main findings, conclusions and recommendations. Participants will discuss these further in plenary, with the goal of strengthening the recommendations and achieving plenary agreement on the findings and recommendations.</p> <p><b>SESSION MODERATOR:</b> <i>Gregory J Smallwood</i></p> <ul style="list-style-type: none"> <li>□ <b>Group 1 outcomes presentation:</b> <i>[Nominated Presenter]</i> 10 minutes</li> <li>□ <b>Group 2 outcomes presentation</b> <i>[Nominated Presenter]</i> 10 minutes</li> <li>□ <b>Group 3 outcomes presentation</b> <i>[Nominated Presenter]</i> 10 minutes</li> <li>□ <b>Group 4 outcomes presentation</b> <i>[Nominated Presenter]</i> 10 minutes</li> <li>□ <b>Plenary Discussion on findings:</b> 40 minutes</li> <li>□ <b>Summary and agreement on next steps</b> <i>[Gregory J Smallwood]</i> 10 minutes</li> </ul> <p><b>Expected outcome:</b> The session will improve on the recommendations from the breakout groups and come up with a final agreement on the recommendations, as well as way forward.</p>
15:30-15:50	20 mins	Health Break
15:50-17:10	90 mins	<p><b>SESSION 8: PLENARY</b>  <b>WORKSHOP CONCLUSION AND AGREEMENT ON FOLLOW-UP ACTIONS</b></p>

**Climate and Clean Air Coalition (CCAC)  
Scientific Advisory Panel Expert Workshop  
“Metrics for Evaluating and Reporting on Black Carbon and Methane Interventions”**

**Concept Note and Agenda**

		<p>This session will seek to pull together the discussions of the past two days and agree on way forward on the two core goals of the workshop: <i>advancement of efforts toward a scientifically credible consensus on metrics for accounting for black carbon and methane interventions</i> and <i>a way forward on the development of a widely applicable inventory development and reporting protocol for black carbon</i>.</p> <p><b>SESSION MODERATOR:</b> <i>Drew Shindell, TBC</i></p>
17:10-17:30	20 mins	<p><b>CLOSING STATEMENTS</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Helena Molin Valdes – Head, CCAC Secretariat</li> <li><input type="checkbox"/> Drew Shindell – Chair, CCAC Scientific Advisory Panel</li> <li><input type="checkbox"/> Rita Cerutti –Co-Chair, CCAC</li> </ul>
<b>17:30pm</b>		<b>Close of Workshop</b>